DOCUMENT RESUME

ED 118 566 95 SP 009 862

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TITLE Teacher Perceptions of the Acceptability of Teacher Training Products. Research and Development Memorandum No. 141.
INSTITUTION Stanford Univ., Calif. Stanford Center for Research and Development in Teaching.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE Dec 75
CONTRACT NE-C-00-3-0061
NOTE 33p.

EDRS PRICE MF-$0.83 HC-$2.06 Plus Postage
DESCRIPTORS Complexity Level; *Evaluation; Inservice Teacher Education; *Instructional Materials; Microteaching; Skill Development; *Teacher Attitudes; Training Objectives

ABSTRACT

The study was designed to find out what kinds of teacher training products were considered most useful by teachers. Twenty-one teachers were asked to evaluate 125 teacher training products divided into various sets by objectives and complexity of training mode and skills required. There was fairly strong agreement on what products were good, with preference going to those that involved microteaching or other clinical practice, varied activities, and complex skills and training. These products tended to be more expensive and to have produced at research and development centers. The methodology used to determine teacher attitudes toward teacher training products is considered an acceptable model for future research, and the authors hope research will be done to determine acceptability of the products after use by teachers. (Statistical tables are included, as are sample questionnaires answered by teachers.) (CD)

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STANFORD CENTER
FOR RESEARCH AND DEVELOPMENT
IN TEACHING

Research and Development Memorandum No. 141

TEACHER PERCEPTIONS OF THE ACCEPTABILITY OF TEACHER TRAINING PRODUCTS

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Stanford, California

December 1975

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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Published by the Stanford Center for Research and Development in Teaching, supported in part as a research and development center by funds from the National Institute of Education, U. S. Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position, policy, or endorsement of the National Institute of Education. (Contract No. NE-C-00-3-0061.)

SP009862

Introductory Statement

The Center's mission is to improve teaching in American schools. Its work is carried out through three research and development programs--Teaching Effectiveness, The Environment for Teaching, and Teaching and Linguistic Pluralism--and a technical assistance program, the Stanford Urban/Rural Leadership Training Institute. A program of Exploratory and Related Studies includes smaller studies not included in the major programs. The ERIC Clearinghouse on Information Resources is also a part of the Center.

This report represents part of the work of the Program on Teaching Effectiveness.

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Abstract

The study was designed to gather information on teachers' perceptions of the usefulness of a number of available teacher training products. Twenty-one teachers of varied teaching experience evaluated twelve products on twelve characteristics (e.g., length of time required for use, variety, outcome level). The products were selected from among 650 produced by R&D centers, universities, state agencies, and individuals. They were chosen to provide a broad range of complexity.

The teachers preferred the products that were most complex and required the most practice. Preferences were consistent across training objectives.

Products are not identified by name or producer.

TEACHER PERCEPTIONS OF THE ACCEPTABILITY OF TEACHER TRAINING PRODUCTS

Dean Cozine

In 1973 the Program on Teaching Effectiveness at SCRDT surveyed the state of the field of teacher training products (TTP's).[1] Over 650 competency-based TTP's--i.e., products with specific behavioral objectives--were identified and cataloged. These products may be said to represent, through 1973, the national storehouse of teacher training materials. They are transportable resources that can be drawn on by teacher centers and teacher education programs across the nation.

The eventual effectiveness of the storehouse depends heavily on the acceptability of the products to teachers, not only in terms of the attractiveness of the methods but also in terms of the teachers' belief that the effort expended in training will be worthwhile.

At present there is very little evidence about teachers' views of training products. Although a number of developers regularly seek teachers' opinions about specific products, there has been no systematic study of teachers' attitudes toward teacher training products in general; nor have teachers been asked their opinion of different types of products.

Thus, developers and program designers alike have little solid evidence about how the ultimate consumer--the teacher--feels about different types of products or the training modes they represent. The present study was designed to gather information on teachers' opinions about a sample of existing teacher training products. It sought to determine whether teachers preferred some types of products and training to others

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[1] For a description of the characteristics of these products, see Program on Teaching Effectiveness, "Teacher Training Products: The State of the Field" (Stanford Center for Research and Development in Teaching, R&D Memorandum No. 116), Stanford University, 1974. (Available only from ERIC ED 087 778.)

and whether their preferences were related to training objectives (that is, whether teachers preferred different types of products and training for different training goals). In addition, this was a pilot test of a general methodology designed to be used to elicit teachers' opinions of the comparative merits of products.

The results of the investigation indicated that teachers do indeed prefer certain types of products and that the preference is consistent across training objectives. The methodology appears to be generally useful; for example, we believe that it can be used to elicit teachers' opinions about nearly any set of training products and/or methods.

For the purposes of this study, teacher training products are defined as the materials and processes designed to develop specified teaching competencies in trainees, and packaged so as to be disseminable to teacher centers and teacher training programs. A teacher is defined as a preservice or in-service teacher who could use the products. The acceptability of a product is the degree to which the trainee indicates a desire to use a given product after becoming familiar with it.

Design

From the catalog compiled by the Program, three sets of products were selected. Each set was oriented toward a distinctive training objective, but the products within the set differed in the complexity of their training mode.

Teachers rated the products on several criteria. Their ratings were analyzed to determine whether preferences were systematically related to training mode or to objective or both. In the analysis, then, training mode and product objective were independent variables, and teacher opinion became the dependent variable.

The Products Sampled

Using the catalog, researchers in the three domains in which the Program on Teaching Effectiveness was then organized (cognitive, social-emotional, and organizational) identified 250 TTP's which appeared most relevant to their domains. The Program had or was able to acquire 125 of these products; the others were unavailable. These 125 TTP's were

grouped into sets on the basis of similarity of terminal objectives; this process produced seven sets of three to seven products. The products were then classified according to the complexity of their training modes.

Classification of products. The training mode of each teacher training product was defined in terms of four characteristics:

1. The number of activities in the product.
2. The kinds of activities required of the trainee in order to complete the terminal objectives (for example, read, take tests, make teaching plans, teach, observe, simulate, discuss; see Appendix I for the complete list).
3. The specificity of the criteria for evaluation of the trainee's performance and the explicitness of the evaluation process (see Appendix I).
4. The time required to complete the training process.

Using these four characteristics we analyzed the sample of TTP's collected by the Program. The most complex products (C's) required the trainee to engage in as many as 14 activities of at least three different kinds and took more than 15 hours to complete. Products classified as C's had knowledge-level objectives which were to be self-evaluated according to stated criteria. At the minimum, C's required the trainee to engage in three activities of no more than two kinds and took three classroom hours to do. The three sets of TTP's with the greatest range of complexity were finally chosen for the study.

The objectives of the three sets (of four products each) were skill in questioning, set induction, and individualization of instruction. Questioning can be considered to be a simple skill, set induction a cluster of skills, and individualization a teaching strategy involving clusters of skills. The objectives as well as the training modes appeared to range from the simple to the complex. Thus, the sample of TTP's varied in complexity both of objectives and of training modes.

Relationship of complexity, developers, and price. Table 1 arrays the products according to complexity of training mode, type of developer, and list price. There were four complex TTP's, three complex/simple, three simple/complex, and two simple. Complexity, price, and developer

TABLE 1

TTP's Purchase Price, Rated Complexity, and Type of Developer

	TTP	Purchase Price	Rated Complexity	Type of Developer
Questioning	Q1	$1145.00	C	R & D
	Q2	275.00	C	R & D
	Q3	2.50	S	Individual
	Q4	.50	C/S	State Agency
Set Induction	SI1	275.00	C	R & D
	SI2	5.00	S/C	University
	SI3	.40	S/C	State Agency
	SI4	1.50	S/C	University
Individuali-zation	I1	1145.00	C	R & D
	I2	1.50	C/S	University
	I3	.50	C/S	State Agency
	I4	1.00	S	Individual

were clearly related, with the more complex products tending to cost more and also tending to come from research and development centers.

The Teachers

The participants in the study were 21 San Francisco Bay Area teachers. Eight answered notices placed on school bulletin boards; 13 were solicited by phone calls from a list provided by a local school district. They were paid $20 for their participation, which took about three or four hours for each teacher.

Each participant filled out a questionnaire that provided information about teacher age, teaching experience, academic preparation, and preservice and in-service training experiences (see Appendix II). Some of the data are in Table 2.

The teachers ranged from 23 to 65 years of age; the median was 32. Half had taught seven years or more; one teacher had taught 40 years, and one only two years. Two-thirds had master's degrees. More than half listed social science as their academic major. Most said they had

TABLE 2

Professional Characteristics of Participants in Study (N = 21)

Characteristic	Number of Participants
Grade level taught	
Preschool	1
Elementary	6
Junior High	12
High School	17
Academic major	
Social Science	11
English	5
Science	2
Math	1
Classics	1
Education	1
Highest degree	
B.A.	7
M.A.	14
Had in-service training	
Workshops	18
Institutes	10
Teacher Centers	5

not found their preservice teacher training very useful, but more than half had favorable opinions about the in-service training they had experienced.

The teachers were also asked to indicate the extent to which they wished to have training in each of 45 teaching skills, including the objectives of the 12 TTP's used in this study (see Table 3). The scale ranged from 0 to 3, with 0 = no training; 1 = training at knowledge level; 2 = training at discrimination level (i.e., training to a level at which instances of the skill taught can be recognized); 3 = training at performance level. The average rating of questioning (skill 11) was 2.05; of set induction (skill 32, "establishing set"), 0.95; and of individualization of instruction (skill 17), 2.30. The lack of interest

TABLE 3

Inventory of Teacher Trainee In-service Training Needs and Interests (N = 21)

	Skills	No Training N	%	Knowledge N	%	Discrimination N	%	Performance N	%	Mean Rating
1	Selecting instructional materials	1	5	8	40	3	15	6	30	1.60
2	Obtaining instructional materials	1	5	15	65	1	5	3	15	1.30
3	Preparing instructional materials	3	15	4	20	4	20	9	45	1.95
4	Selecting instructional process strategies	1	5	1	5	6	30	12	60	2.45
5	Planning with students	1	5	3	15	2	10	14	70	2.45
6	Planning with other teachers	2	10	5	25	3	15	10	50	2.05
7	Arranging the instructional environment	3	15	4	20	5	25	8	40	1.90
8	Selecting behavior modification strategies	2	10	5	25	6	30	7	35	1.90
9	Listening	6	30	5	25	3	15	6	30	1.45
10	Explaining	6	30	4	20	2	10	8	40	1.60
11	Questioning	2	10	5	25	3	15	10	50	2.05
12	Giving examples	7	35	3	15	4	20	6	30	1.45
13	Pacing (a lesson)	3	15	5	25	4	20	7	35	1.70
14	Introducing (a lesson or unit)	3	15	7	35	5	25	5	25	1.60
15	Sequencing (a lesson)	4	20	7	35	3	15	6	30	1.55
16	Summarizing	6	30	8	40	3	15	3	15	1.50
17	Individualizing instruction	1	5	4	20	3	15	12	60	2.30
18	Emphasizing	7	35	8	40	2	10	3	15	1.05
19	Using groups	3	15	1	5	5	25	11	55	2.20
20	Using games and simulation	4	20	3	15	4	20	10	50	2.10
21	Using community resources	2	10	5	25	2	10	11	55	2.10
22	Gesturing (facial expression, etc.)	7	35	5	25	2	10	5	25	1.20
23	Reviewing	5	25	6	30	5	25	5	20	1.55
24	Motivating	1	5	2	10	2	10	15	75	2.55

TABLE 3 (cont'd.)

	Skills	No Training N	%	Knowledge N	%	Discrimination N	%	Performance N	%	Mean Rating
25	Reinforcing	2	10	5	25	10	50	3	15	1.76
26	Eliciting feedback	0	0	2	10	5	25	13	65	2.55
27	Providing feedback	3	15	3	15	9	45	5	25	1.80
28	Managing field trips	7	35	6	30	3	15	4	20	1.20
29	Using AV equipment	4	20	10	50	3	15	3	15	1.25
30	Giving homework	9	45	6	30	2	10	3	15	0.95
31	Preventing discipline problems	1	5	2	10	4	20	13	65	2.45
*32	Establishing set	7	45	5	25	4	20	2	20	0.95
33	Interacting with supervisors	6	30	4	20	5	25	5	25	1.45
34	Using student ideas	3	15	3	15	5	25	9	45	2.00
35	Interacting with parents	5	25	2	10	6	30	7	35	1.75
36	Preparing behavioral objectives	5	25	6	30	3	15	6	30	1.50
37	Measuring student entry behavior	6	30	6	30	5	25	3	15	1.25
38	Selecting tests	3	15	8	40	7	35	2	10	1.40
39	Constructing tests	4	20	5	25	8	40	3	15	1.50
40	Assessing student cognitive behavior	5	25	4	20	6	30	5	25	1.55
41	Assessing student affective behavior	2	10	3	15	4	20	11	55	2.20
42	Evaluating student cognitive behavior	4	20	4	20	8	40	4	20	1.60
43	Evaluating student affective behavior	2	10	4	20	5	25	9	45	2.05
44	Reporting procedures and record keeping	5	25	9	45	1	5	5	25	1.30
45	Self-observation skills	2	10	3	15	2	10	13	65	2.30
	Total	178		227		187		326		
	Mean	3.9	19	5.0	25	4.2	21	7.2	35	1.73

*Seven did not mark this item because they did not know what the term meant.

in set induction training may have been influenced by the unfamiliarity to many teachers of the term "establishing set." These initial ratings of training preferences did not prove to be related to preferences for the products.

The Instruments for Rating Acceptability

Two instruments developed especially for the study were used to determine the acceptability of the 12 products to the participating teachers.

Product Evaluation Form No. 1 (Appendix III) contained 13 items. Each of the first 12 items consisted of a statement describing some aspect of one of the four characteristics of the product's training mode. The teachers were asked to evaluate each aspect, as it was represented in the product at hand, in terms of its influence on their desire to use the product. The teachers marked their responses on a five-point scale ranging from very positive to very negative.

In Item 13, the teachers were asked to indicate their overall desire to use the product. The same five-point scale was used.

Product Evaluation Form No. 2 (Appendix IV) contained three items. Item (a) asked the teachers to rank the products in a given set in terms of overall acceptability.

Item (b) asked the teachers to indicate whether they had found, among the products within the set, a product on which a satisfactory training experience could be built, or whether, given the choice, they would look outside the set. Item (c) asked for a brief explanation of the response to (b).

Procedures

The 21 teachers came to SCRDT for a total of three or four hours over a period of 14 days. They were first told the purpose of the study and were then asked to fill out the background questionnaire (Appendix II). They studied the products independently in a room set aside for that purpose.

The sets, and the products in each set, were systematically reordered to ensure that the order in which sets and individual products were evaluated was different for each teacher. The teachers were assigned to three

groups of seven. Each group rated two sets of products (eight products in all). (Group 1 rated sets one and three, Group 2 rated sets two and three, and Group 3 rated sets one and two.) Thus, each set and each product was evaluated by 14 teachers.

The teachers were asked to evaluate each product on its own merits--not on a comparative basis. To do this task, they examined a product, then immediately filled out Product Evaluation Form No. 1. They then proceeded to the next product and so on until they completed the set. When they finished the set, the four Product Evaluation Forms No. 1 were collected and the teachers then completed Product Evaluation Form No. 2, on which they ranked the products in the set. Form No. 2 was then collected and the process was repeated for the next set. The data thus collected are the substance of the investigation.

Results

Overall Acceptability

The aggregate of the first 12 items on Product Evaluation Form No. 1 and Item 13 were treated as separate indicators of product acceptability (see Table 4).

For three of the 12 products more than 64 percent of the ratings were positive (1 or 2 on a five-point scale) on both measures of acceptability. Three received more than 50 percent positive ratings on Item 13. Five received fewer than 50 percent positive ratings; and one product was rated negatively by a majority on both measures. Thus, in terms of the averages, three TTP's were highly acceptable to the teachers; three were somewhat acceptable; five were somewhat unacceptable; and one was clearly unacceptable. The complex products consistently received the highest ratings.

Products tended to receive similar ratings on each of the characteristics. Table 5 presents the average ranking of the products on each one. Inspection of the table indicates that the highest-ranking products tended to receive high ratings on most or all criteria, and lower-ranked products tended to be rated low on most criteria. In other words, the ratings were probably global in most cases; products tended to have across-the-board acceptability.

TABLE 4

Acceptability Level Based on Aggregated Ratings of 12 Items and Item 13
(Products are listed in order from most to least acceptable.)

				1		2		3		4		5		1 & 2		4 & 5	
	Product	Classification	Item	Very Positive N	%	Positive N	%	Neutral N	%	Negative N	%	Very Negative N	%	Positive N	%	Negative N	%
Acceptable	SI-1	C	1-12	40	23.8	90	53.8	31	18.5	7	4.1	0	0.0	130	78.0	7	4.1
			13	2	14.4	10	71.4	1	7.2	1	7.2	0	0.0	12	85.8	1	7.2
	I-1	C	1-12	24	14.3	90	53.8	37	22.1	15	8.9	2	1.2	114	68.1	17	10.1
			13	4	28.6	5	35.7	4	28.6	1	7.2	0	0.0	9	64.3	1	7.2
	Q-1	C	1-12	22	13.2	86	51.2	30	18.0	22	13.2	8	4.8	108	64.4	30	18.0
			13	2	14.4	8	57.1	2	14.4	2	14.4	0	0.0	10	71.4	2	14.4
Somewhat Acceptable	Q-2	C	1-12	19	11.3	53	31.5	67	40.1	23	13.8	6	3.6	72	42.5	29	17.4
			13	2	14.4	8	57.1	2	14.4	2	14.4	0	0.0	10	71.4	2	14.4
	SI-2	S/C	1-12	11	6.6	69	41.2	52	31.0	31	18.5	5	3.0	80	47.8	36	21.5
			13	2	14.4	6	42.8	1	7.2	3	21.4	2	14.4	8	57.1	5	35.7
	I-2	C/S	1-12	8	4.7	62	37.1	55	32.8	40	23.9	3	1.8	70	41.8	43	25.7
			13	1	7.2	6	42.8	0	0.0	6	42.8	1	7.2	7	50.0	7	50.0
Somewhat Unacceptable	SI-3	S/C	1-12	2	1.2	55	32.8	48	28.7	42	25.1	21	12.5	57	34.0	63	37.6
			13	1	7.2	3	21.4	3	21.4	4	28.6	3	21.4	4	28.6	7	50.0
	I-3	C/S	1-12	12	7.1	49	29.3	47	28.1	53	31.7	7	4.1	61	36.4	60	35.8
			13	2	14.4	2	14.4	2	14.4	7	50.0	0	0.0	4	28.6	7	50.0
	I-4	S	1-12	7	4.1	40	23.9	56	33.5	48	28.7	17	10.1	47	28.0	65	38.8
			13	1	7.2	3	21.4	3	21.4	4	28.6	3	21.4	4	28.6	7	50.0
	Q-3	S	1-12	6	3.6	44	26.3	65	38.8	48	28.7	5	3.0	50	29.9	53	31.7
			13	0	0.0	3	21.4	6	42.8	4	28.6	1	7.2	3	21.4	5	35.7
	SI-4	S/C	1-12	8	4.8	37	22.1	63	37.7	44	26.3	16	9.4	45	26.9	61	36.4
			13	0	0.0	4	28.6	2	14.4	6	42.8	2	14.4	4	28.6	8	57.1
Unacceptable	Q-4	C/S	1-12	2	1.2	26	14.9	54	32.3	81	48.6	5	3.0	28	16.1	86	51.6
			13	0	0.0	0	0.0	6	42.8	4	28.6	4	28.6	0	0.0	8	57.1

Note: For items 1-12, N is the total number of responses to the 12 items; % is based on 168 responses (14 teachers X 12 items). For item 13, N is the total number of responses; % is based on 14 responses.

TABLE 5

Rank of Products on Each Criterion Item
(0 = very positive; 5 = very negative)

Product	Time		Learning Activities		Training Variety		Logic of Learning Activities		Transfer-ability		Intellec-tuality		Packaging		Individual-ization		Effort-Outcome Congruence		Outcome Level		Subject Matter Context		Effort-Payoff Congruence		Item 13	
	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N	R	N
SI-1	0	1	0	1	0	2	0	1	0	1	0	2	0	1	0	1	0	1	0	2	0	1	0	1	0	1
I-1	0	3	0	1	0	1	0	1	0	3	0	1	0	2	0	2	0	2	0	2	0	6	0	4	0	4
Q-1	0	6	0	1	0	3	0	3	0	2	0	3	0	5	0	2	0	3	0	1	0	2	0	2	0	2
Q-2	0	6	0	6	0	6	0	4	0	5	0	7	0	5	0	5	0	9	0	4	0	3	0	4	0	2
SI-2	0	2	0	4	0	6	0	4	0	4	0	4	0	8	0	7	0	3	0	5	0	4	0	3	0	5
I-2	0	5	0	4	0	5	0	4	0	7	0	4	0	5	0	5	0	5	0	7	0	5	0	7	0	6
Q-3	1	2	1	2	1	2	0	4	0	8	0	4	0	3	0	9	0	5	1	1	0	6	0	7	0	7
1-3	0	9	0	6	0	4	0	4	1	0	0	9	0	8	0	4	0	5	0	7	0	6	0	7	0	7
SI-3	1	1	0	9	0	9	0	4	0	6	0	7	0	8	0	7	0	9	0	5	0	6	0	7	0	7
I-4	0	3	0	6	1	0	1	0	1	2	0	9	0	8	1	0	0	5	1	0	1	2	0	6	1	1
SI-4	0	8	0	9	1	0	1	1	0	8	1	1	0	4	1	1	0	9	0	9	1	0	1	1	0	7
Q-4	0	9	1	1	0	8	1	2	1	1	1	2	0	8	1	2	1	2	1	1	1	1	1	2	1	2

R = ranking (0 = very positive, 5 = very negative)
N = number of teachers

Overall, 63 percent of the ratings of complex products on Items 1-12 were positive and only 12 percent were negative. The difference between the complex products and all others was substantial. The differences among the others, however, were minimal (see Table 6). Thus, the teachers were in substantial agreement about the acceptability of the products.

Analysis of Acceptability by Item

The 12 criterion items on the Product Evaluation Form No. 1 were related to specific characteristics of products. The results, item by item, are interesting despite the relative uniformity of ratings across items. (See Table 7.)

Item 1: Time. The time required to use a TTP was not, in itself, a significant determinant of product acceptability. The four products that were rated most positively required from half an hour to 41 hours of training. The four with most negative ratings required from three to twelve hours. The teachers were evidently willing to invest greater amounts of time in training if they thought the activities would be worthwhile.

Item 2: Kinds of Activities. Products were distinguished especially by the amount of clinical practice (usually microteaching) they included. Reactions to activities resulted in the most polarized ratings. Four products received very high ratings on their activities (86 percent or more 1 or 2 ratings). No other product received average positive ratings of 50 percent. Three of the four highly rated products required the most microteaching; the other products normally included only a concluding practice session with children. Thus, the teachers apparently were favorably inclined toward the products that included generous amounts of teaching practice.

On the other hand, one of the least acceptable products (64 percent negative ratings) ranked fourth in the amount of microteaching it included. In this case, the microteaching did not represent successive practice of a given skill or increasing complexity of performance, but required the teacher to use microteaching to demonstrate ability to ask one question tuned to each level of the Bloom Taxonomy of Educational Objectives. Microteaching in the case of this product was used as evaluation rather than practice.

TABLE 6

Ratings by Complexity of Product

Product Evaluation Form No. 1
Items 1-12

Product Complexity	1 Very Positive		2 Positive		3 Neutral		4 Negative		5 Very Negative		1 & 2		4 & 5	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
C (N=4)	105	15.6	319	47.6	165	24.7	67	9.9	16	2.4	424	63.2	83	12.3
C/S (N=3)	22	4.3	137	27.2	156	30.1	174	34.5	15	3.9	159	31.5	189	38.4
S and S/C (N=5)	34	4.0	245	29.3	284	33.9	213	25.6	64	7.6	279	33.3	277	33.2

Item 13

C	10	17.9	31	55.3	9	16.3	6	10.8	0	0.0	41	73.2	6	10.8
C/S	3	9.0	14	25.0	9	16.3	20	35.7	7	12.5	19	34.0	27	48.2
S and S/C	2	3.6	13	23.2	14	25.0	18	32.2	9	16.3	15	26.8	27	48.2

Product Evaluation Form No. 2

	1		2		3		4		1 & 2		3 & 4	
	N	%	N	%	N	%	N	%	N	%	N	%
C	31	55.3	11	19.7	9	16.2	5	8.8	42	75.0	14	25.0
C/S	9	16.2	17	30.4	13	23.2	17	30.4	26	46.6	30	53.6
S and S/C	2	3.6	14	25.1	20	35.7	20	35.7	16	28.7	40	71.4

Note: N = number of responses; % is based on 168 responses for each product times the number of products in the category.

TABLE 7

Acceptability Level and Particular Attributes
(Percentages. Pos = ratings 1 and 2; Neg = ratings 4 and 5.)

	Product	Pos/Neg	Time	Learning Activities	Training Variety	Logic of Learning Activities	Transfer-ability	Intellec-tuality	Packaging	Individ-ualization	Effort-Outcome Congruence	Outcome Level	Subject Matter Context	Effort-Payoff Congruence
Acceptable	SI-1	Pos	64.3	85.7	71.4	92.8	92.8	85.7	64.3	64.3	78.1	71.4	78.5	85.7
		Neg	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	7.2	7.2	0.0	7.2
	I-1	Pos	50.0	85.7	85.7	92.8	78.6	100.0	57.1	57.1	57.1	71.4	28.6	50.0
		Neg	35.7	7.2	7.2	0.0	14.4	0.0	7.2	7.2	14.4	7.2	0.0	21.4
	Q-1	Pos	35.9	85.7	64.4	85.7	85.7	71.5	21.4	57.1	50.0	78.5	57.1	71.4
		Neg	42.8	14.4	7.2	14.4	7.2	7.2	21.4	21.4	35.2	7.2	7.2	28.6
Somewhat Acceptable	Q-2	Pos	35.7	35.7	35.7	64.3	64.3	42.8	21.4	42.8	28.6	50.0	50.0	50.0
		Neg	28.6	28.6	28.6	14.4	0.0	0.0	0.0	21.4	21.4	14.4	14.4	35.7
	SI-2	Pos	57.1	42.8	35.7	64.3	71.4	57.1	14.4	35.7	50.0	42.8	42.8	57.1
		Neg	0.0	21.4	35.7	0.0	28.6	7.2	35.7	42.8	28.6	21.4	28.6	14.4
	I-2	Pos	42.8	42.8	42.8	64.3	50.0	57.1	21.4	42.8	35.7	35.7	35.7	28.6
		Neg	14.4	42.8	28.6	14.4	21.6	14.4	50.0	35.7	28.6	35.7	7.2	14.4
Somewhat Unacceptable	Q-3	Pos	7.2	7.2	7.2	64.4	42.8	57.1	35.7	28.6	35.7	14.4	28.6	28.6
		Neg	35.7	35.7	35.7	21.4	28.6	28.6	14.4	14.4	50.0	48.2	28.6	42.8
	I-3	Pos	21.4	35.7	50.0	64.3	28.6	35.7	14.4	50.0	35.7	35.7	28.6	28.6
		Neg	35.7	42.8	35.7	21.4	57.1	35.7	50.0	21.4	42.8	42.8	21.4	28.6
	SI-3	Pos	14.4	28.6	21.4	64.3	57.1	42.8	14.4	35.7	28.6	42.8	28.6	28.6
		Neg	35.7	35.7	35.7	14.4	35.7	35.7	50.0	35.7	50.0	35.7	35.7	50.0
	I-4	Pos	50.0	35.7	14.4	50.0	14.4	35.7	14.4	21.4	35.7	21.4	7.2	35.7
		Neg	14.4	35.7	64.4	28.6	35.7	42.8	28.6	57.1	42.8	57.1	21.4	35.7
Unacceptable	SI-4	Pos	28.6	28.6	14.4	35.7	42.8	28.6	28.6	14.4	28.6	28.6	21.4	21.4
		Neg	14.4	50.0	64.4	21.4	42.8	28.6	28.6	35.7	28.6	28.6	28.6	50.0
	Q-4	Pos	21.4	14.4	28.6	28.6	21.4	7.2	14.4	7.2	14.4	14.4	14.4	14.4
		Neg	35.7	64.3	71.4	50.0	42.8	35.7	42.8	64.3	57.1	50.0	28.6	64.3

Item 3: Training Variety. In general, a greater variety of activities generated higher ratings. The product that required the greatest variety of activities was rated most positive (85 percent); the product with the fewest different activities received the fewest positive ratings (7 percent). This attribute, however, is not independent of other attributes. The three TTP's with the most negative ratings included from two to six different activities.

Item 4: The Logic of Learning Activities. Item 4 asked the teacher to rate the relationship between the learning activities required and the specified outcomes. With the exception of two TTP's, the teachers rated all products positively, which was to be expected, since the products had been screened before the teachers evaluated them.

Item 5: Transferability. Item 5 asked for ratings of the relationship of the training to the needs of the classroom. This item resulted in ratings consistent with product complexity.

Item 6: Intellectuality. Ratings of intellectuality of content were generally correlated with the other ratings, the less complex products receiving the lower ratings.

Item 7: Packaging. This item discriminated among products somewhat less well than the others. There was a tendency toward "neutral" ratings, but the commercial products received somewhat more favorable ratings.

Item 8: Individualization. This item asked the teachers to indicate whether products were flexible--i.e., included enough alternative activities. The more complex products received somewhat higher ratings.

Item 9: Effort-to-Outcome. Although the more complex products required much more time and generally more activities than did the others, they generally received higher ratings in this category. In fact, only one product which required a large number of activities--thirty--received very many neutral or negative ratings.

Item 10: Outcome Level. Teachers rated complex TTP's with performance level outcomes highly positive and all other TTP's negative. Apparently teachers want performance-level training and perceived the complex products as most capable of that task.

Item 11: Subject Matter Context. This item asked the teachers whether using the subject they taught as the context for training made any difference to them. Their ratings indicated much ambivalence on this factor.

Item 12: Effort-Payoff Congruence. On this item the more complex TTP's were rated most positive and the others most negative. The teachers seemed to indicate that the more thoroughly a TTP develops a teacher's skill, the more likely that that skill will improve the teacher's classroom performance.

Congruence among Teachers

The teachers were in substantial agreement about the overall attractiveness of the products. In Table 8 the ranking of the products by the teachers is presented. Inspection of the table indicates the extent of agreement that prevailed. For example, in Teacher Group 1, six of the seven members rated product Q-1 first and three rated Q-4 last. Group 3 disagreed more about Q-1, but five members put Q-4 last and six placed Q-3 third.

Considering the overlap among products in each set--they had the same goal and used the same types of activity, differing chiefly in the number and complexity of activities and the amount of microteaching--this degree of agreement was not anticipated.

Summary

In each case the teachers tended to agree that they preferred complex training products. These products were the most expensive to purchase and were produced at research and development centers. The overall impressions of the products tended to overshadow ratings of specific aspects of the products. There were no dimensions along which the complex products received poor ratings.

It is especially worth noting that the greater effort required by the complex training products did not depress their ratings.

TABLE 8

Rankings of Products by Teachers

	Teachers	Products											
	ID	Q1	Q2	Q3	Q4	SI1	SI2	SI3	SI4	I1	I2	I3	I4
Group 1	4	2	1	4	3					1	2	4	3
	5	1	4	3	2					3	1	4	2
	6	1	3	2	4					1	3	2	4
	8	1	2	3	4					1	2	3	4
	13	1	4	2	3					1	2	3	4
	16	1	4	3	2					1	4	3	2
	20	1	3	2	4					1	2	3	4
Group 2	3					1	2	4	3	1	4	2	3
	9					2	4	1	3	3	2	1	4
	12					1	3	2	4	1	2	3	4
	17					1	2	3	4	3	1	4	2
	18					1	4	2	3	3	1	2	4
	19					1	2	3	4	2	4	1	3
	21					1	3	4	2	2	1	4	3
Group 3	1	2	1	3	4	2	1	4	3				
	2	1	2	3	4	1	3	2	4				
	7	2	1	3	4	1	2	3	4				
	10	2	1	3	4	1	3	2	4				
	11	4	3	1	2	2	1	4	3				
	14	1	4	3	2	2	1	4	3				
	15	3	1	3	4	1	4	2	3				

For now it seems safe to conclude that the consumers of teacher training products apparently agree that complex training which includes clinical practice is desirable and is preferable to the simpler didactic training. This investigation needs to be replicated with other sets of products related to comparable goals and also with teachers who have had training experience with the products.

Appendix 1

SCHEME FOR CLASSIFYING PRODUCTS

1. Number of activities

2. Kinds of activities

Activity

a. reading

1. book	no. _____	pp. _____
2. article	_____	_____
3. manual	_____	_____
4. mimeo	_____	_____
5. other	_____	_____
6. total	_____	_____

b. viewing

1. filmstrip	no. _____
2. videotape	_____
3. film	_____
4. demonstration	_____
5. other	_____
6. total	_____

c. participating

1. classroom	no. _____
2. small group	_____
3. simulation	_____
4. role play	_____
5. other	_____
6. total	_____

d. performing

1. objective test	
a) knowledge	no. _____
b) discrimination	_____
2. essay test	_____
3. research paper	_____
4. project	_____
5. oral exam	_____
6. microteaching	_____
7. regular classroom teaching	_____
8. other	_____

Appendix 1 (cont'd.)

3. Evaluation

   1. set criteria _____
   2. low inference _____
   3. high inference _____
   4. negotiable criteria _____
   5. peer administration _____
   6. self administration _____
   7. super administration _____

4. Time required (hours) _____

Appendix II

TEACHER CHARACTERISTICS

Part I: Previous Teaching Experience

1. Age _____

2. Teaching Experience

grade level	number of years taught	dates
preschool		
elementary		
junior high		
other		
Total		

3. Are you presently teaching? _____

4. If you answered No to question 4, how long has it been since you last taught? _____

5. Education

highest degree earned _____

Undergraduate major _____

Graduate major _____

number of semester hours in education _____

6. In-service training (experiences that you have had since you began teaching which were explicitly designed for teachers).

	number of times	last experience
workshops		
Federally funded Institutes		
Teacher Centers		
other		

Part II: In-service Training Interests or needs

1. In your teaching experiences, to what extent have you been able to apply the concepts, theories, and skills that you learned in your preservice professional courses? (circle the most appropriate response)

very frequently often occasionally seldom never

2. In your teaching experiences, to what extent have you been able to apply the theories, concepts, and skills that you learned in your <u>in-service</u> professional training experiences? (circle the appropriate response)

very frequently often occasionally seldom never

Competency-based teacher education theory holds that teacher trainees can be trained to competently perform the behaviors and skills. There are three levels of training, knowledge, discrimination, and performance. Each has the same ultimate objective that the trainee be able to competently perform the behavior or skill in the classroom. They differ in the time and effort required and in the certainty that the trainee can perform the target behavior or skill at the end of the training program.

<u>Level 1</u> At this level the trainee becomes competent in the <u>knowledge</u> of the theory and research concerning the target behavior or skill. Training at this level assumes that the trainee will be able to transfer the knowledge into competent performance of the target behavior or skill. Of the three levels, this level requires the least amount of time and effort in the training program.

<u>Level 2</u> At this level the trainee becomes competent in the ability to <u>discriminate</u> the target behavior or skill from others when observed in a real setting. Training at this level assumes that if the trainee can recognize the behavior or skill when observed, that he will be able to transfer the ability to discriminate into the competent performance of the target behavior or skill. Of the three levels, this level requires more time and effort in the training program than does level 1, but requires less time than level 3.

<u>Level 3</u> At this level the trainee becomes competent in the <u>performance</u> of the target behavior or skill through practicing in a simulated setting. This level assumes that the trainee must practice the target skill or behavior in order to become competent in it. Of the three levels, this level takes the most time and effort in the training program.

3. For each of the 45 behaviors and skills listed below, circle the number that corresponds to the level training you think is most appropriate to your needs, or that you think is most appropriate to the kind of skill involved. Circle 1 if you desire training at the level 1, 2 for training at level 2, and 3 for training at level 3. If you do not think that the behavior or skill listed is appropriate to your needs, circle 0.

Skills	no training	knowledge	discrimination	performance
1 selecting instructional materials	0	1	2	3
2 obtaining instructional materials	0	1	2	3
3 preparing instructional materials	0	1	2	3
4 selecting instructional process strategies	0	1	2	3
5 planning with students	0	1	2	3
6 planning with other teachers	0	1	2	3
7 arranging the instructional environment	0	1	2	3
8 selecting behavior modification strategies	0	1	2	3
9 listening	0	1	2	3
10 explaining	0	1	2	3
11 questioning	0	1	2	3
12 giving examples	0	1	2	3
13 pacing (a lesson)	0	1	2	3
14 introducing (a lesson or unit)	0	1	2	3
15 sequencing (a lesson)	0	1	2	3
16 summarizing	0	1	2	3
17 individualizing instruction	0	1	2	3
18 emphasizing	0	1	2	3
19 using groups	0	1	2	3
20 using games and simulation	0	1	2	3
21 using community resources	0	1	2	3
22 gesturing (facial expression, etc.)	0	1	2	3
23 reviewing	0	1	2	3
24 motivating	0	1	2	3

Skills	no training	knowledge	discrimination	performance
25 reinforcing	0	1	2	3
26 eliciting feedback	0	1	2	3
27 providing feedback	0	1	2	3
28 managing field trips	0	1	2	3
29 using AV equipment	0	1	2	3
30 giving homework	0	1	2	3
31 preventing discipline problems	0	1	2	3
32 establishing set	0	1	2	3
33 interacting with supervisors	0	1	2	3
34 using student ideas	0	1	2	3
35 interacting with parents	0	1	2	3
36 preparing behavioral objectives	0	1	2	3
37 measuring student entry behavior	0	1	2	3
38 selecting tests	0	1	2	3
39 constructing tests	0	1	2	3
40 assessing student cognitive behavior	0	1	2	3
41 assessing student affective behavior	0	1	2	3
42 evaluating student cognitive behavior	0	1	2	3
43 evaluating student affective behavior	0	1	2	3
44 reporting procedures and record keeping	0	1	2	3
45 self-observation skills	0	1	2	3

Appendix III

PRODUCT EVALUATION FORM NO. 1

Product Title _____

Developer _____ Date _____

This form consists of 13 items. All except the last one contain a statement describing a characteristic or an attribute of the teacher training product. You are to evaluate each characteristic, as it is represented in the product, in terms of its influence on your desire to use that product in a teacher training program. For each item, circle the number that corresponds to the response that most nearly reflects your own reaction.

Number	Response
1	This characteristic, as represented in this particular product, very positively influences my desire to use the product.
2	This characteristic, as represented in this particular product, positively influences my desire to use the product.
3	This characteristic, as represented in this particular product, has a neutral influence on my desire to use the product.
4	This characteristic, as represented in this particular product, negatively influences my desire to use the product.
5	This characteristic, as represented in this particular product, very negatively influences my desire to use the product.

Characteristic	Definition
1. Time	refers to the number of classroom hours that are either specified or estimated by the developer that it should take the trainee to accomplish the objective of the product. For this product, how does the amount it requires influence your desire to use it?

very positively positively neutral negatively very negatively

1 2 3 4 5

2. Learning activities	refers to the kinds of interactions in which the product requires the trainee to engage in order to become competent in the target behavior or skill. How do the learning activities used by this product influence your desire to use the product?

very positively positively neutral negatively very negatively

1 2 3 4 5

3. Training variety — refers to the number of different learning activities used by the product to accomplish its objectives. How does this characteristic, as represented in this product, influence your desire to use the product?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

4. Logic of learning activities — refers to the logical match between what the trainee is required to do and the target behavior or skill. How does the logic of the learning activities required by the product influence your desire to use the product?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

5. Transferability — refers to the degree to which the product explicitly prepares the trainee to use the target behavior or skill in the classroom. How do the transferability characteristics of this product influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

6. Intellectuality — refers to the intellectual ability level that the product seems to be addressed to. How does the intellectuality of this product influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

7. Packaging — refers to the physical appearance of the product. How does the physical appearance of this product influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

8. Individualization — refers to the number of optional learning activities provided by the product for the trainee to become competent in the target behavior or skill. How does the individualization characteristic of this product influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

9. Effort-outcome congruence — refers to the apparent reasonableness of the number of learning activities required in the training process with respect to the apparent complexity of the target behavior or skill. How does this characteristic, as represented in this product, influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

10. Outcome level — refers to the level of competency (knowledge, discrimination, or performance) in the target behavior or skill that product requires the trainee to demonstrate. How does the outcome level required by this product influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

11. Subject matter context — refers to the training context used by the product with respect to a specific curriculum area (e.g., math, science, etc.) Some products set the training in a particular curriculum area others do not. How does the subject matter context of this product influence your desire to use the product?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

12. Effort-payoff congruence — refers to the apparent relationship between the amount of time and effort that the product requires of the trainee in order to become competent in the target behavior or skill and the apparent payoff in the classroom. How does this characteristic, as represented in this product, influence your desire to use it?

very positively	positively	neutral	negatively	very negatively
1	2	3	4	5

13. If you were a trainee in a teacher training program and you were required to use this product, how would you describe your feelings about the assignment? Circle the response that most nearly reflects your feelings.

very positive	positive	neutral	negative	very negative

Appendix IV

PRODUCT EVALUATION FORM NO. 2

Suppose that the target skill or behavior developed by the products of this set were required by a teacher training program. Given that condition:

a. rank the products in the order that you would recommend that they be adopted for use in the program. Do this task by writing the product's name by the ranking that you want to give it. 1 is the highest rank, 5 is the lowest.

ranking	product name
1	
2	
3	
4	
5	

b. If you had a choice between (1) recommending a product from this set, or (2) recommending that a new product be developed, what would you recommend? Circle one of the following.

(1) from set (2) new

c. Explain briefly the reasons for your response to question b.